What is claimed is:

1. A semiconductor device comprising:

a gate electrode formed on one conductive type semiconductor substrate through a gate insulation film;

a high concentration reverse conductive type source region adjacent to one end of said gate electrode;

a low concentration reverse conductive type drain region formed facing said source region through a channel region;

a high concentration reverse conductive type drain region separated from the other end of said gate electrode and included in said low concentration reverse conductive type drain region; and

a middle concentration reverse conductive type layer at a region spanning at least from the position having the predetermined space from said gate electrode to said high concentration reverse conductive type drain region, and formed so that high impurity concentration becomes lower at a region near the gate electrode than near said high concentration reverse conductive type drain region.

2. A semiconductor devise according to claim 1, wherein said middle concentration reverse conductive type layer is formed at a region spanning at least from said gate electrode to said high concentration reverse conductive type drain region so that the impurity concentration gradually becomes high from said gate electrode to said high concentration

reverse conductive type drain region.

3. A semiconductor divide according to claim 1, wherein said middle concentration reverse conductive type layer is formed at a region spanning at least from said gate electrode to said high concentration reverse conductive type drain region so that the impurity concentration becomes high step by step from said gate electrode to said high concentration reverse conductive type drain region.

4. A semiconductor device according to claim 1, wherein said high concentration reverse conductive type source region is formed in said low concentration reverse conductive type drain region.

5. A semiconductor device according to Claim 1, wherein said middle concentration reverse conductive type layer is formed at an entire region spanning from said gate electrode to said high concentration reverse conductive type drain region.

6. A semiconductor device according to Claim 1, wherein said middle concentration reverse conductive type layer is formed at an entire region spanning from said gate electrode to said high concentration reverse conductive type source·drain region.

7. A method of manufacturing a semiconductor device comprising processes of:

forming a low concentration reverse conductive type

drain region on one conductive type semiconductor substrate;

forming a gate insulation film at the entire surface of said semiconductor substrate;

forming a gate electrode overlapping at least upper side of said drain region by patterning after forming a conductive film on the entire surface;

forming a high concentration reverse conductive type source region adjacent to one end of said gate electrode and a high concentration reverse conductive type drain region separated from the other end of said gate electrode and included in said low concentration reverse conductive type drain region; and

forming a middle concentration reverse conductive type layer having high impurity concentration peak at a position of the predetermined depth in said substrate at a region spanning at least from the position having the predetermined space from said gate electrode to said high concentration reverse conductive type drain region, and formed so that impurity concentration is lower at a region near the gate electrode than near said high concentration reverse conductive type drain region.

8. A method of manufacturing a semiconductor device comprising processes of:

forming a low concentration reverse conductive type drain region on one conductive type semiconductor substrate;

forming a gate insulation film at the entire surface of said semiconductor substrate;

forming a gate electrode overlapping at least upper side of said source·drain region by patterning after forming a conductive film on the entire surface;

forming a high concentration reverse conductive type source·drain region separated from said gate electrode and included in said low concentration reverse conductive type source·drain region; and

forming a middle concentration reverse conductive type layer having high impurity concentration peak at a position of the predetermined depth in said substrate at a region spanning at least from the position having the predetermined space from said gate electrode to said high concentration reverse conductive type source·drain region, and formed so that impurity concentration becomes lower at a region near the gate electrode than near said high concentration reverse conductive type drain region.

9. A method of manufacturing a semiconductor device according to Claim 7,

wherein said middle concentration reverse conductive type layer is formed by ion-implanting from oblique upper side of the gate electrode by using a photoresist covering said gate electrode as a mask.

10. A method of manufacturing a semiconductor device according to Claim 7 ,

wherein said middle concentration reverse conductive type layer is formed by ion implantation from oblique upper side of the gate electrode through a tapered side wall insulating film formed on a side wall of the gate electrode.

11. A method of manufacturing a semiconductor device according to Claim 10,

wherein said middle concentration reverse conductive type layer is formed so that the impurity concentration gradually becomes high from said gate electrode to said high concentration reverse conductive type drain region.

12. A method of manufacturing a semiconductor device according to Claim 10,

wherein said middle concentration reverse conductive type layer is formed so that the impurity concentration becomes high step by step from said gate electrode to said high concentration reverse conductive type drain region.